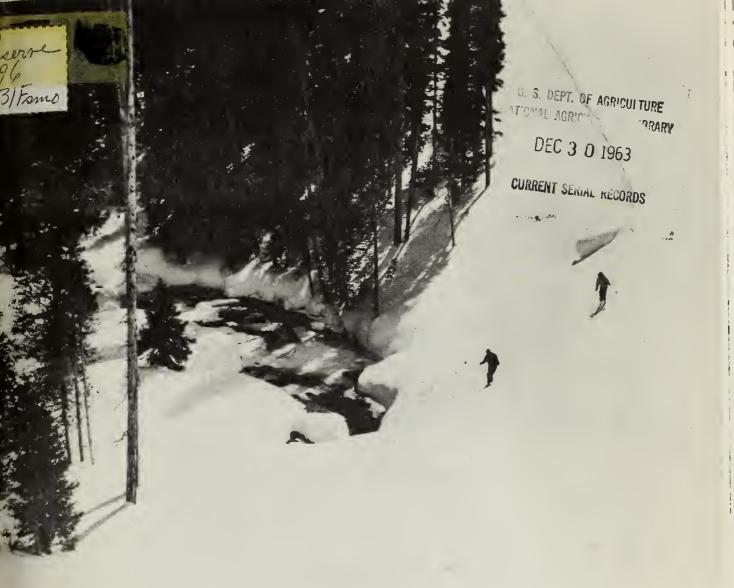
# **Historic, Archive Document**

Do not assume content reflects current scientific knowledge, policies, or practices.





#### WATER SUPPLY OUTLOOK

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

for

MONTANA

UNITED STATES DEPARTMENT of AGRICULTURE...SOIL CONSERVATION SERVICE, and
MONTANA AGRICULTURAL EXPERIMENT STATION

Data included in this report were obtained by the agencies named above in cooperation with Federal, State and private organizations listed on the last page of this report

JUNE 1, 1963 and SPECIAL MEASUREMENTS

#### UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

To Recipients of Water Supply Outlook Reports:

The climate of the cultivated and populated areas of the West is characterized by relatively dry summer months. Such precipitation as occurs falls mostly in the winter and early spring months when it is of little immediate benefit to growing crops. Most of this precipitation falls as mountain snow which stays on the ground for months, melting later to sustain streamflow during the period of greatest demand during late spring and summer. Thus, nature provides in mountain snow an imposing water storage facility.

The amount of water stored in mountain snow varies from place to place as well as from year to year and accordingly, so does the runoff of the streams. The best seasonal management of variable western water supplies results from advance estimates of the streamflow.

A snow survey consists of a series of about ten samples taken with specially designed snow sampling equipment along a permanently marked line, up to 1000 feet in length, called a snow course. The use of snow sampling equipment provides snow depth and water equivalent values for each sampling point. The average of these values is reported as the snow survey measurement for a snow course.

Snow surveys are made monthly or semi-monthly beginning in January or February and continue through the snow season until April, May or June. Currently more than 1400 western snow courses are measured each year. These measurements furnish the key data for water supply forecasts.

Streamflow forecasts are obtained by a comparison of total or maximum snow accumulation, as measured by snow water equivalent, to the subsequent spring and summer or snowmelt season runoff over a period of years. The snow water equivalent measured in selected snow courses provides most of the index to the streamflow forecast for the following season. More accurate forecasts are usually obtained when other factors such as soil moisture, base flow and spring precipitation are considered and included in the forecast procedure. Early season forecasts assume average climatic conditions through the snowmelt season.

Listed below are the Federal-State-Private Cooperative Snow Survey and Water Supply Forecast reports available for the West which contain detailed information on snow survey measurements, streamflow forecasts, reservoir storage, soil moisture and other guide data to water management and conservation decisions. Soil Conservation Service Reports may be secured from Water Supply Forecasting Unit, Soil Conservation Service, P.O. Box 4170, Portland 8, Oregon.

#### PUBLISHED BY SOIL CONSERVATION SERVICE

REPORTS	ISSUED	LOCATION	COOPERATING WITH
RIVER BASINS			
WESTERN UNITED STATES	MONTHLY (FEBMAY)	PORTLAND. OREGON	_ ALL CODPERATORS
STATES			
AL A SK A	_ MONTHLY (MARMAY)	. PALMER. ALASKA	_ ALASKA S.C.D.
ARTZONA	SEMI-MONTHLY (JAN.15 - APR.1)		SALT R. VALLEY WATER USERS ASSOC ARIZ, AGR. EXP. STATION
CDLORADO AND NEW MEXICO	MONTHLY (FEBMAY)	FORT COLLINS, CDLORADO	– COLO. STATE UNIVERSITY COLO. STATE ENGINEER N. MEX. STATE ENGINEER
IDAHO	MDNTHLY (JANJUNE)	BOISE, IDAHO	_ IDAHO STATE RECLAMATION ENGINEER
MONTANA	(ANDL MAL) YAHTMOM	BOZEMAN. MONTANA	MONT. AGR. EXP. STATION
NE VA DA	MONTHLY (JANMAY)	REND. NEVADA	NEVADA DEPT. DF CONSERVATION AND NATURAL RESOURCES - DIVISION OF WATER RESOURCES
OREGON	MDNTHLY (JANJUNE)	PORTLAND, OREGON	OREG. STATE UNIVERSITY OREGON STATE ENGINEER
UTAH	MONTHLY (JAN JUNE)	. SALT LAKE CITY. UTAH	UTAH STATE ENGINEER
WASHINGTON-	MONTHLY (FEBJUNE)_	SPOKANE, WASHINGTON	WN. STATE DEPT. OF CONSERVATION
WYOMING	MONTHLY (FEBJUNE)	CASPER, WYOMING	_ WYOMING STATE ENGINEER
	PUBLISHED B	Y OTHER AGENCIES	
REPORTS	ISSUED		AGENCY
BRITISH COLUMBIA	MONTHLY (FEBJUNE)	WATER RIGHTS BR. NATURAL RESOURCE B.C., CANADA	, DEPT. OF LANDS, FORESTS AND S, PARLIAMENT BLDG., VICTORIA,
CALIFORNIA	MONTHLY (FEBMAY)	CALIF. DEPT. DF	WATER RESOURCES, P.O. BOX 388,

SACRAMENTO, CALIF.

#### WATER SUPPLY OUTLOOK

#### FEDERAL-STATE-PRIVATE COOPERATIVE SNOW SURVEYS

for

MONTANA

Report Prepared

Ву

P. E. Farnes Acting Snow Survey Supervisor

Soil Conservation Service Snow Survey Section Box 855, Bozeman, Montana

Issued By

H. D. Hurd
State Conservationist
Soil Conservation Service
Bozeman, Montana

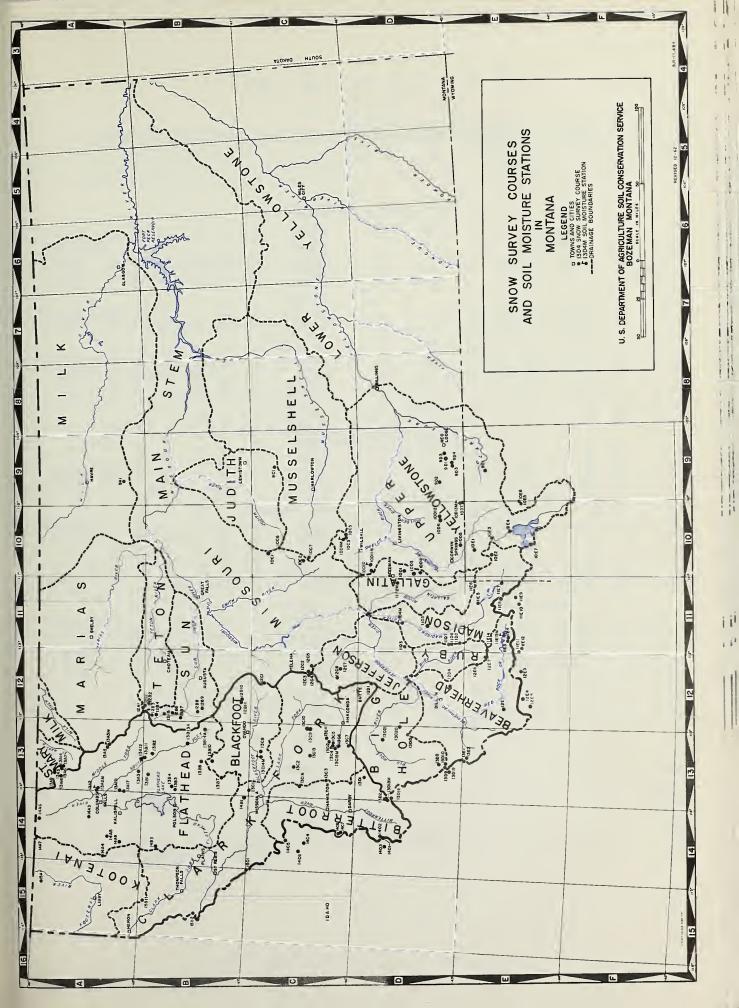
J. A. Asleson
Director
Montana Agricultural
Experiment Station
Bozeman, Montana



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#### INDEX TO MONTANA SNOW COURSES AND SOIL MOISTURE STATIONS

	INDEX TO	MONTANA	SNOW COURSE:	S AND SOI	L MOISTURE	STATIONS			
Location									
Drainage Basin & Course Name	Number	Elev.	Sec. Let.	Twp.	Range Long.	Record Began	Messuring Dates 1	Measured By 2	
			COLUMBIA	RIVER BAS	IN				
KOCTENAL RIVER									
Baree Creek Brush Creek	15B11 14A4	5500 5000	6 13	25N 30N	30M 26W 29W	1937 1937	4,5,5½	2 1.2	
Red Mountain Weasel Divide	15A1 14A7	6000 5450	4 8	36N 37N	29W 24W	1937 1937	3,4,5,5,6 3,4,5,5,6 3,4,5,5,6	1,2 1,2 1,2	
FLATHEAD RIVER							-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,	
Bestn Creek	13B14A	5000	11	19N	12W	1951	2,3,4,5	1	
Bassoo Peak Big Craek	1483 1383	5150 6750	11 7	24N 22N	25W 18W	1960 1941	3,4,5 3,4,5 6 3,4,5	1,5 1,5 1,2 1,2 1,5	
Camp Misery Desert Mountein Fetty Craek	13A17 13A2	6400 5600	30 24	28N 31N 22N	18W 19W	1962 1937	3,4,5 1,2,3,4,5 6	1,2	
Griffin Creak Divide	13B4 14A9	5500 5150	11	28N	18W 25W	1962 1960	1,2,3,4,5 6 3,4,5, 6 3,4,5 3,4,5,5½,6 2,3,4,5		
Hell Rosring Divide Holbrook	14A3 13B13A	5770 4530	35 18	32N 21N	22W 13W	1942 1951	3,4,5,5½,6 2,3,4,5	1	
Kishenehn Logen Creek	14A6 14A5	3886 4300	14 34	37N 30N	22W 24W	1954	3,4 3,4,5	6 1,2	
Maries Pess Mineral Creek	13A5 13A16	5250 4000	34 29	30N 35N	14W 17W	1934 1939	1,2,3,4,5	3	
North Fork Jocko Quintonkon	1387 13A13	6330	3 11	17N 26N	17W 17W	1941 1951	3,4,5,52,6	1,5 1,2 1,2	
Spotted Bear Mt.	1382 13A10	7000	23	25N 28N	15W 19W	1948 1948	1,2,3,4,5	1,2	
Strewbarry Lake Trinkus Lake Trout Lake	13B1 13A12	6500 6500 3600	11 9 21	25N 28N	17W 17W	1948 1948 1948	3,4,5 3,4,5	1	
Twin Creeks	13811	3580	14	26N	16W	1951	1,2,3,4,5	1,2	
Upper Holland Lake CLARK FORK RIVER	1385	7000	28	20N	16W	1948	3,4,5	1	
Black Pine	13013	7100	23	8N	15W	1959	3,4,5	1	
Copper Creek Cotter Mine	12B10 12B11	5700 6250	1 2	15N 15N	9₩ 9₩	1962 1962	3,4 3,4 1,2,3,4,5 3,4 3,4,5 3,4	1	
Covota Hill	13B10 13C9	4200 7800	12	18N 8N	16W	1947	1,2,3,4,5	1,2	
El Dorado Mine Fred Burr Pass Gold Creek Lake	13011	8000 7200	23 12 14	6N 8N	12W 13W 12W	1957 1949	3,4,5	1	
Hoodoo Creek	1501	6200	9	14N	27W 13W	1937 1936	3,4,5	1,2	
Intergeerd Lubrecht Forast #6	1304 1308	6450 4040	6 11	5N 13N	1.49	1951	1,2,3,4,5	8	
Red Lion Skelkaho Summit	13012 1303	7000 7259	27 30	6N 6N	13W 17W	1958 1937	3,4,5 3,4,5,5½,6	1	
Slide Rock Mt. Southern Cross	1302 1305 1307	7100 6500	35 8	10N 5N	16W 13W	1937 1936	3,4,5 2,3,4	1 4	
Storm Lake Stuart Mill	1306	7780 6500	19 19	4N 5N	13W 13W	1939 1936	3,4,5 2,3,4 1,2,3,4,5 3,4,5 3,4,5 2,3,4,5 2,3,4 1,2,3,4,5 2,3,4,5 1,2,3,4,5	1 4	
T.V. Mountein	14B1	6800	33	15N	19W	1956	1,2,3,4,5	1	
BITTERROCT RIVER Ambrose	13016	6.00	28	9N	18W	1960	2.46	1	
Eest Fork R.S.	1301	6475 5400	16	2N 2S	17W	1937	3,4,5 3,4 1,2,3,4,5,5½,6	î 1,3	
Gibbons Pass Lost Horse	1302 1407	7100 5940 5580	4 5	4N	19W 23W 23W	1934 1960	3,4,5	1,3	
Nez Perce Camp Nez Perce Pass	14D2 14D1	6575	19 25	1S 1S	24W	1937 1937	3,4,5 3,4,5 3,4,5	1	
Twin Lakas	1408	6510	32	5N	2 <i>3</i> W	1960	3,4,5	1	
ST. MARY RIVER			SASKATCHE	THE PARTY	Loted Lit				
Iceberg Lake #3	13A3	5600	34 10	36N	16W	1922	5	3,9	
Josephine Lower #9	13A14 13A7	4900 5700	10 22	35N 35N	16W 16W	1955 1922	5	3,9 3,9 3,9	
Mount Allen #7 Fiegen Pess #6 Ptermigen #B	13A7 13A6 13A8	5700 5500 5800	15 32	35 N 36 N	16W 16W	1922 1937	5	3,9 3,9	
	23.10	,,,,,		RIVER BA		2751		247	
BEAVERHEAD RIVER									
Bloody Dick Certer Creek	13010	7600	1.2	BS	16W	1948	3,4	1	
Gold Stone	12D4 13D9	7400 B100	22 11	88 88	7W 16W	1963 1948	3,4 3,4 3,4,5 3,4,5 3,4,5	1	
Lakeview Canyon Lakeview Ridge	11E4 11E3	6930 7400	26 27	14S 14S	2W 2W	1948 194B	3,4,5	10 10	
Lembi Pass Trail Crack	13E1 13E2	7480 7090	9 15	10S 10S	15W 15W	1948	3,4 3,4	1	
White Fine Ridge	12E1	8850	18	145	9W	1948	3,4,5	î	
RUBY RIVER									
Clover Meadow Divide Notch	11D8 12E7 12E6	8600 7900 8500	2B 14 1B	95 125 15	2W 4W 4W	1963 1963 1963	3,4,5 3,4,5 3,4,5	1 1 1	
BIG BOLE RIVER									
Abundance Lake Darkhorsa Lake	13020	8800 8600	7 4 15	3S 8s	12W 16W	1963 1963	3,4,5	1	
Elk Horn Springe Foolhen Jehnke Creek	13D15 13D21 13D8	8000 8500 7340	15 14 25	4S 1S 7S	12W 13W 16W	1935 1963 1948	3,4,5 3,4,5 3,4,5 3,4	3 1	
JEFFERSON RIVER	2,000	, ,,40	2)	13	TON	1740	Jy44		
Berry Mandou	1207	7300	17	5N	5U	1962	3.4	1	

Dreinege Basin & Course Name	Number	Elev.	Location Sec. Lat.	Tup.	Ranga Long.	Record Began	Meesuring Dates 1	Measure By 2
MADISON RIVER								
Cell Road Crockett Lake Hebgen Dam Jack Crack North Meadow West Yallowstone	11D7 11D6 11E5 11D5 11D3 11E7	8050 8400 6550 6800 7500 6700	21 20 22 13 23 34	8s 8s 11s 6s 3s 13s	2W 2W 3E 1E 3W 5W	1962 1962 1934 1961 1961 1934	3,4,5 3,4,5 1,2,3,4,5 3,4 3,4 1,2,3,4,5	1 1 3 1 1 3
GALLATIN RIVER								
Devil's Slide Hood Meadow New World Twenty-One Mila	10D4 10D3 10D1 11E6	8190 6600 6700 7150	14 22 24 1	5S 4S 3S 11S	6E 6E 6E 5E	1935 1935 1939 1934	2,3,4,5, 2,3,4,5 2,3,4 1,2,3,4,5	6 1 1 1 3
MISSOURI RIVER MAIN S	TEM							
Chessman Reservoir Crystel Lake Elk Peek Gresshopper Kings Hill Rocky Boy Stemple Peas Tan Mile Creek L. Ten Mile Creek M. Ten Mile Creek M.	1205 901 1007 1002 1001 941 1201 1202 1203 1204	6200 6100 8000 7000 7500 5200 6900 6250 6800 8000	2 19 10 19 35 15 16 13 13	8N 12N 8N 9N 13H 28N 13N 8N 8N	5W 18E 8E 8E 7E 16E 7W 6W 6W	1936 1941 1963 1938 1934 1941 1934 1935 1934 1935	1,2,3,4,5 3,4 3,4,5 3,4,5 3,4,5 1,2,3,4,5 1,2,3,4,5 1,2,3,4,5	3 1 1 3 7 3 3 3 3
SUN-TETON-MARIAS RIVE	RS							
Benchmark Cebin Creek Five-Bull Freight Creek Getes Park Goat Mountain Waldron Creek West Fork Wrong Creek Wrong Creek	1288 1286 1289 1241 1285 1287 1282 1281 1284 1283	5500 5400 5600 6000 5300 7000 5600 6000 5700 6800	9 33 36 13 31 20 16 6 32	20N 23N 20N 26N 24N 22N 25N 25N 25N 25N	104 104 104 104 104 94 94 104 104	1948 1949 1948 1948 1949 1934 1948 1948 1949	3,4 3,4 3,4 3,4,5 3,4 3,4 3,4	1 1 1 1 3 1 1 1
JUDITH RIVER								
Spur Perk	1006	8000	20	12 N	9E	1963	3,4	1
UPPER YELLOWSTONE RIV					,-	-/-5	-,-	
Bald Ridge Casp Senia Cooke City Crevice Mt. Gertrude Lake Grizzly Peak Independence Monusant Peak Forcupine R.S. Timberline Creek Sacajawse West Rosebud	1005 901 1007 1005 903 905 1006 10012 1003 904 10010 902	7500 7890 7400 8400 9250 8400 8000 9000 6500 8850 6550 7500	11 2 25 22 10 26 22 22 10 36 10	4N 8S 9S 9S 8S 7S 7S 7S 4N 8S 2N 7S	10E 18E 14E 9E 18E 19E 12E 12E 10E 18E 6E 16E	1961 1937 1937 1935 1961 1961 1940 1961 1938 1961 1960 1960	3,4 3,4,5 1,2,3,4,5 3,4,5 1,2,3,4,5 3,4,5 3,4,5 3,4,5 3,4,5 3,4,5 3,4,5 3,4,5 3,4,5	1 1 6 2 1 1 1 1 1 1 1 1 4
FLATHEAD RIVER								
Desert Mountein Maries Pass	13A2M 13A5M	5600 5250	24 34	31N 30N	19W 14W	1956 1950	Monthly Monthly	1
CLARK FORK RIVER	10010	/ 150	,	637	3.00	1065	V 412-	
Georgetown Lake Lubracht Forest BITTERROOT RIVER	13015H 13014M	6450 4100	6	5N 13N	13W 15W	1962 1961	Monthly Monthly	8
Gibbons Pess	13D18M	7100	4	2S	199	1962	Monthly	1
			MISSOURI	RIVER BAS	IN			
BEAVERHEAD RIVER					_			
Lakaview	11E13M	6700	23	145	29	1962	Monthly	10
MADISON RIVER							-	
Red Bluff	11D4M	4800	7	38	),E	1961	Monthly	7
GALLATIN RIVER								
Collage Sits	11D2M	4856	18	2S	5E	1956	Monthly	1
YELLOWSTONE RIVER								
Bettle Ridge Northeast Entrence Shields River	10D11M 10D13M 10C4M	6020 7350 5850	32 33 3	2N 9S 4N	7E 14E 10E	1960 1962 1960	Monthly Monthly Monthly	1 6 1

<sup>1/</sup> Numerals 1,2,3,4,5,5,6 refer to January 1, February 1, March 1, April 1, May 1, May 15 and June 1.

<sup>|</sup> Muserals rafer to Agency that secures the snow survay as follows:
| 1. Scil Conservation Service | 6. National Park Service | 7. Montana Experiment Station | 8. Unional Park Forestry School | 8. Unional State Forestry School | 9. Desinten West Forestry School | 9. Desinten West Forestry School | 9. Unional State Service | 9. Unional State Service | 9. S. Indian Service | 9. S. Indian State Service |

M - Soil Moisture A - Aeriel Marker

# SOIL MOISTURE DATA

AS OF JUNE 1, 1963

(Inches)

			SOIL	PROFILE Y	CURRENT	DATA	PAST	RECORD
NO.	SOIL MOISTURE STATION NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGI
		COLUMBIA	RIVEF	BASIN				
Flathead 13A2M 13A5M	Desert Mountain Marias Pass	5600 5250	54 54	8.4 6.5	5/29 5/28	8.4 5.7	8.7 6.1	8.7 5.8
Clark For 13C15M	<u>ck</u> Georgetown Lake	6450	48	8.3	Delaye	ed Report	8.3	-
Bitterroo 13D18M	ot Gibbons Pass	7100	48	7.1	5/31	7.2	7.1	<b>en</b>
		MISSOURI	RIVER	BASIN				
Beaverhea	<u>ad</u> Lakeview	6700	48	15.3	Delaye	ed Report	14.5	
Madison 10D4M	Red Bluff	4800	40	4.7	6/2	1.8	2.3	-
<u>Gallatin</u> 11D2M	College Site	4856	54	14.5	5/31	10.8	13.8	11.0
Yellowsto 10D11M 10D13M 10C4M	one Battle Ridge Northeast Entrance Shields River	6020 7350 5850	48 48 48	15.4 9.4 17.8 <u>1</u> /		16.8 9.3 17.0	17.0 _ 18.4	=

<sup>1/</sup> Capacity and previously published data revised.



### SNOW SURVEY DATA

AS OF MAY 15, 1963

		70 01 11					(Inches)
		(	CURRENT DATA			PAST	RECORD
SNOW COURSE			DATE OF	SNOW	WATER	WATER CONTENT	
NO.	NAME	ELEVATION	SURVEY	DEPTH	CONTENT	LAST YEAR	AVERAGE
		COLUMBIA	RIVER BA	SIN			
KOOTENAI	RIVER						
15B11 Can. 10 Can. 43 Can. 33 Can. 32 Can. 10A Can. 10B 15A1 Can. 20A 14A7	Baree Creek Fernie Gray Creek Kicking Horse Marble Canyon New Fernie Morrissey Ridge Red Mountain Sullivan Mine Weasel Divide	5500 3500 5100 5400 5000 4100 6100 6000 5100 5450	5/15 5/16 5/13 5/16 5/15 5/16 5/16 5/14 5/15 5/14	54 0 44 28 17 0 52 37 12 55	25.6 0.0 16.3 10.5 5.7 0.0 22.8 14.5 4.7 24.4	37.7 0.0 17.1 10.0 4.1 0.0 18.7 15.4 4.4 30.0	40.4* 0.8* 17.2* 7.5* 8.5* - 16.7* 6.0* 31.4*
FLATHEAD	RIVER						
14A3 13B7	Hell Roaring Divide North Fork Jocko	5770 6330	5/13 5/14	49 75	22.5 36.4	end end	est.
CLARK FOR	K RIVER						
1303	Skalkaho Summit	7259	5/15	58	23.7	=	eta,
BITTERROO	T RIVER						

7100

Gibbons Pass

13D2

5/15 45 16.8

19.5\*



# SNOW SURVEY DATA

AS OF JUNE 1, 1963

		AS OF JU	INE 1, 19	63			(Inches)	
			C	URRENT DATA		PAST	RECORD	
	SNOW COURSE		DATE	SNOW Depth	WATER CONTENT	WATER CONTENT		
NO.	NAME	ELEVATION	SURVEY	<b>JE! 111</b>	CONTENT	LAST YEAR	AVERAGE	
		COLUMBIA	RIVER BA	SIN				
KOOTENAI	RIVER							
Can. 43 Can. 33 Can. 10B 15Al 14A7	Gray Creek Kicking Horse Morrissey Ridge Red Mountain Weasel Divide	5100 5400 6100 6000 5450	5/29 5/31 5/31 5/31	22 0 0 19	8.9 0.0 0.0 9.2	10.8 0.0 18.7	9.0*	
FLATHEAD	RIVER							
13B3 13A2 13B4 14A3 13B7	Big Creek Desert Mountain Fatty Creek Hell Roaring Divide North Fork Jocko	6750 5600 5500 5770 6330	5/27 5/29 5/27 5/29 5/28	71 0 7 5 41	37.9 0.0 3.1 2.4 21.8	46.2 0.0 6.2 - 35.0	39.7* - - - 28.1*	
CLARK FOR	K RIVER							
1303	Skalkaho Summit	7259	5/27	32	15.4	11.7	* : =	
BITTERROC	T RIVER							
13D2	Gibbons Pass	7100	5/31	3	1.4	1.6	7.4*	
MISSOURI RIVER BASIN								
GALLATIN	RIVER							
10D4	Devil's Slide	8100	6/1	42	19.5	21.4	-	



#### RESERVOIR STORAGE DATA

AS OF MAY 31, 1963

	7.0 0.				(1000 Acre Feet)			
			USEABLE STORAGE					
BASIN	RESERVOIR	USEABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE			
COLUMBIA RIVE	CR BASIN							
Flathead	Hungry Horse Flathead Lake Camas <u>l</u> / Mission Valley <u>2</u> /	3,428.0 1,791.0 45.2 100.3	2,948.0 1,703.0 33.5 37.5	2,859.0 1,364.0 41.2 62.1	2,770.0** 1,606.7 33.3 66.7			
Clark Fork	Georgetown Lake Noxon	31.0 334.6	27.8 185.8	24.2 170.4	23.6			
Bitterroot	Como Painted Rocks	34.9 31.7	36.2 33.2	31.9	32.5 32.2			
MISSOURI RIVE	R BASIN							
Beaverhead Ruby Madison Gallatin Missouri	Lima Ruby Hebgen Lake Ennis Lake Middle Creek Canyon Ferry Hauser & Helena Lake Helena Holter Lake Smith River Ackley Lake Durand Martinsdale Deadman's Basin Fort Peck Gibson	84.0 38.8 384.8 41.0 8.0 2,043.0 61.9 10.4 81.9 10.7 5.8 7.0 23.1 72.2 19,410.0 105.0	48.3 - 382.1 39.2 8.0 1,998.0 56.8 8.6 75.6 - - - 10,660.0 98.8	26.6 38.8 281.0 38.4 7.3 1,780.0 52.0 7.0 76.3 8.9 2.2 4.9 12.7 20.8 8,746.0 93.1	68.7 36.6** 298.6 34.7 6.2** 1,803.0** 52.0 7.3** 72.9 9.0** 4.6 6.7 15.4 50.8** 12,611.0 97.2			
	Willow Creek Pishkun	32.3 32.0	28.2 24.2	27.4 28.5	24.7 29.3			
Marias	Lower Two Medicine Four Horns Swift Lake Francis Tiber	16.6 19.2 30.0 112.0 1,313.0	- 24.3 64.7 682.8	25.5 96.0 690.4	9.5 9.6 29.9 106.1 736.6**			
Milk	Fresno Nelson Lake Sherburne	127.2 66.8 66.1	61.8 44.4 -	67.5 29.7	96.9 36.3 36.9			
Yellowstone	Mystic Lake Tongue River Cooney	20.8 68.0 27.5	4.1 - 19.0	1.2 - 20.0	6.1 30.5 18.2			

<sup>1/</sup> Sum of four small reservoirs on west side of Flathead Lake.
2/ Sum of eight small reservoirs in Mission Valley not including Jocko Lake.



# Agencies Cooperating in Collecting Data Contained in this Bulletin

- U. S. Forest Service Region I, Missoula, Montana
- U. S. Geological Survey Helena, Montana
- U. S. Army Corps of Engineers Portland, Oregon Seattle, Washington Omaha, Nebraska Riverdale, N. D.
- U. S. Indian Irrigation Service St. Ignatius, Montana
- U. S. Weather Bureau Helena, Montana
- U. S. Fish & Wildlife Service Red Rock Lakes Refuge Monida, Montana
- U. S. Bureau of Reclamation Billings, Montana Boise, Idaho
- Montana Power Company Butte, Montana
- Agricultural Experiment Station North Montana Branch Station Havre, Montana
- State Water Conservation Board Helena, Montana

- National Park Service Yellowstone National Park Glacier National Park
- Montana Experiment Station Montana State College Bozeman, Montana
- Bonneville Power Administration Portland, Oregon
- Montana State School of Forestry Montana State University Missoula, Montana
- Soil Conservation Service Montana, Wyoming, Idaho
- Soil Conservation Districts Montana Counties
- Johnson Flying Service, Inc. Missoula, Montana
- Water Rights Branch
  Dept. of Lands & Forests
  Victoria, British Columbia
- Department of Northern Affairs & National Resources Calgary, Alberta
- State Engineer
  Montana and Wyoming

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
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# FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation, navigation, mining and industry

"The Conservation of Water begins with the Snow Survey"